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Addressing unmet oral health care needs in Michigan with a mid-level dental provider

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Abstract

Oral health care is essential to overall health, however, nearly one-third of US citizens lack access to basic preventive dental care services. This unfortunate state of affairs is primarily the result of the high costs of care and the inaccessibility to providers. This manuscript addresses unmet oral health care needs in Michigan, and proposes a possible solution to address barriers to care: the introduction of a mid-level dental provider within the dental field.

Good oral health is essential to good overall health. However, due to high costs of care and geographic inaccessibility of providers, nearly one-third of individuals in the US lack access to basic preventive and primary dental care services (Garcia, 2010). Vulnerable populations are especially likely to lack access to dental care. For social workers, improving access to oral care is a vital step in increasing overall health of individuals and society at large, as well as reducing disparities for vulnerable groups.

One solution to the problem of unmet oral health care needs is to introduce a new “team member” into the dental field, the “mid-level dental provider” (MDP). Much like nurse practitioners in the broader health care field, MDPs serve a role in between that of a dentist and dental hygienist. MDPs are generally allowed to perform basic preventive and basic restorative dental procedures under the direct, indirect, or general (depending on the model) supervision of a dentist, with the goal of increasing access to care for underserved populations. This article examines the problem of unmet oral health care and the needs of underserved individuals in Michigan. It then discusses why establishing a MDP licensure in Michigan might be an effective and low-cost solution to addressing these needs, while also creating a new class of professional jobs.

The Importance of Oral Health

The word “oral” in Latin root and common usage refers to the mouth. The mouth is not just teeth and gums, but also the tissues, ligaments, bone, throat, tongue, lips, salivary glands, chewing muscles, and jaw. The branches of the nervous, immune, and vascular systems are also essential in the protection and nourishment of oral tissues, as well as in providing connections from the brain to the rest of the body. Oral health does not just mean healthy teeth, it also means being free of chronic oral-facial pain, throat cancers, oral soft tissue lesions, birth defects such as cleft lip and palate, and many other diseases and disorders. These features allow us to speak, smile, sigh, kiss, smell, taste, touch, chew, swallow, and express emotions (USDHHS, 2000).

The Problem of Unmet Oral Health Care Needs

The Surgeon General's report, *Oral Health in America*, states "Oral health is an integral part of overall health. You cannot be healthy without oral health" (USDHHS, 2000, p. 18). Research shows a link between chronic oral infections and heart and lung diseases, stroke, low birth weight, and premature births; associations between periodontal disease and diabetes have also been found (USDHHS, 2000). Furthermore, oral problems can affect quality of life, impacting self-image, self-esteem, and well-being. Oral disease can interfere with daily living, including participation in work or school, food choices and pleasures of eating, and communication (USDHHS, 2000). Oral disease affects millions of Americans and tooth decay is the single most common childhood illness, yet oral disease is preventable (MDCH, 2006). In the report *Oral Health in America*, the Surgeon General described a "silent epidemic of oral diseases affecting our most vulnerable citizens" (USDHHS, 2000, p. 1).

Michigan's Unmet Oral Health Care Needs

In the US and in Michigan, some of the most underserved populations in terms of oral health care include children in poverty, people with special needs and disabilities, the elderly, and racial and ethnic minority groups. Oral health care is of critical importance to the health and well-being of Michigan's children. Dental care is the largest unmet health need among low-income children (Gehshan, 2008), and dental disease is the most prevalent chronic disease of childhood (Riter, 2008). The 2005-2006 Count Your Smiles (CYS) survey of Michigan found that nearly one in ten third grade children in Michigan (9.6 percent) had immediate dental care needs (CYS, 2006). The survey also revealed that one in ten (9.6 percent) were in need of immediate dental care for signs of pain, infection, or swelling (CYS, 2006; MDCH, 2010). Toothaches were more common in Detroit and among those who had difficulty obtaining dental care. Furthermore, one in four Michigan third grade children (25 percent) had untreated dental disease, and Hispanic and African American children had higher rates of untreated dental disease (CYS, 2006; MDCH, 2010). The CYS survey

found that one in six third grade children (15.1 percent) lack dental insurance, which is twice the amount of Michigan children who lack medical insurance (CYS, 2006). Children without dental insurance had greater rates of dental disease and much less access to dental care. Additionally, racial and ethnic minorities have greater difficulty obtaining dental care, as well as those not covered by private insurance (CYS, 2006). Students on free and reduced lunch in Michigan have a higher rate of tooth decay, untreated dental disease, and symptoms of tooth pain, swelling, or infection. “Free and reduced lunch school children also had fewer annual visits to the dentist, more barriers to accessing dental care, and are less likely to have sealants on their first molar teeth” (MDCH, 2010, p. 18).

Regional differences in oral health care were also found in the CYS survey. In the Upper Peninsula and Northern Lower Peninsula of Michigan, children had the highest rates of tooth decay. The rural Southern Lower Peninsula had the lowest rates of sealants and the highest proportion of uninsured children, and the highest rates of immediate dental need. Furthermore, there was a higher rate of dental disease for children attending school in Wayne County compared to those attending school in Macomb or Oakland County. Large social and racial disparities are found in both dental disease and access to care across Detroit (CYS, 2006). Oral health problems in childhood are extremely critical, because oral pain can negatively impact a child’s learning, nutrition, and sleeping (MDCH, 2006). Also, lack of dental care can lead to long-term health care expenses, as costs of oral health problems in childhood compound over the lifetime (Nash, 2009).

In 2009 in the US, there were an estimated 35-43 million people with physical and mental disabilities. Health care access for special needs individuals has been challenging, especially for low-income families and those without health insurance (MDCH, 2009). Some studies have shown that individuals with disabilities have a higher rate of poor oral hygiene, which is due to difficulties accessing needed dental care, as well as personal limitations in the understanding of and ability to perform personal oral prevention services (MDCH, 2006). According to the 2008 Michigan Behavior Risk Survey, those without a disability are more likely to have dental insurance than those with a disability, and the disabled are less likely to have access to care due to cost. The 2006 Behavioral

Risk Survey found that disabled adults were more likely to be missing one or more teeth (61.8 percent) or all their teeth (10.2 percent) than those without disabilities (36.9 percent and 3.4 percent respectively) (MDCH, 2010). Among the respondents from Oral Health Care Needs Survey 2009 of special needs and individuals with disabilities, only 3.89 percent of dentists accept all four types of insurances (MDCH, 2010). The survey demonstrated the need for dental professionals across the state to undertake treatment with special needs patients (MDCH, 2009).

Access to oral health care is limited for aging adults, and as the US population of aging Americans continues to grow, their need for oral care will increase. This is particularly important because older adults have chronic health concerns such as cardiovascular problems, diabetes, and pneumonia which can adversely affect their oral health status (MCOHC for the Aging). A 2008 study in Michigan found that 25 percent of older adults had not seen a dentist in over a year. Barriers such as affordability of care, lack of dental insurance, transportation, and the fear of visiting the dentist still exist (MDCH, 2010).

Racial disparities in oral health for Michigan are similar to that experienced across the nation. The 2010 Michigan Oral Health Plan states, “non-Hispanic blacks, Hispanics, and American Indians and Alaska Natives generally have the poorest oral health of any of the racial and ethnic groups in the U.S. population. These groups tend to be more likely than non-Hispanic whites to experience dental caries, are less likely to have received treatment for it, and have more extensive tooth loss” (MDCH, 2010, p. 16). African Americans are more likely to have tooth loss than whites, and African American males have the highest rate of oral cancer and highest mortality rate due to oral cancer. African Americans are less likely to visit the dentist, have their teeth cleaned, and receive sealants on their first molars. Hispanics and African Americans are less likely to have sealants on their first molars than Whites. Hispanics also have the highest rate of inappropriate bottle use, putting their children at risk for early childhood tooth decay. The State Varnish! Michigan program found that in 2007-2008 untreated tooth decay was higher in American Indians (69 percent) than White non-Hispanic Americans (39 percent) (MDCH, 2010).

In the US and in Michigan, low-income families and individuals are significantly affected by oral disease. People of low

socio-economic status in Michigan are also less likely to visit the dentist or have their teeth cleaned. Furthermore, those with a high school education or less are less likely to visit the dentist for treatment or preventive care. Tooth loss occurs at higher rates for those of low-income and low education levels (MDCH, 2010). The need in Michigan is great, and barriers and access to oral care need to be understood and addressed.

Dental Workforce

The demand for oral health care in Michigan is greater than the dental workforce is able to meet. In Michigan in 2007, there were 6,570 dentists, and general dentistry was practiced by 85 percent of dentists. Additionally, 22.7 percent of Michigan dentists had at least one Medicaid claim and only 10.5 percent had extensive claims. Furthermore, some parts of the state have virtually no dentists—12 of 83 counties in Michigan have less than five dentists, nine counties lack a single dentist that accepts Medicaid, and one county does not have a dentist (MDCH, 2010). A recent report found there to be a serious shortage of dentists willing to care for uninsured and publicly insured populations, and communities lack enough dentists to care for even privately insured patients (Addressing Dental Workforce, 2009).

The Issue of Insurance

Lack of dental insurance is a major barrier to accessing care in Michigan. Nearly 1.7 million Michigan residents are enrolled in Medicaid and some 1.2 million state residents are uninsured (The Henry J. Kaiser Family Foundation, 2011). The 2006 and 2007 surveys found the “vast majority of Medicaid and uninsured dental patients are seen by a small minority of dental providers” (Addressing Dental Workforce, 2009, p. 4). Adults who are enrolled in Medicaid have the most difficulty obtaining dental care. Eighty-one percent of dentists reported that in a typical month they do not see any adult patients who have Medicaid as their coverage and 90 percent of dentists do not see any patients in a typical month who pay on a sliding scale (Addressing Dental Workforce, 2009). For older adults, over half are not covered by insurance that pays or

partially pays for dental services, 31 percent have private insurance, and 12 percent are covered by public assistance. Furthermore, only 8 percent of dentists accept Medicaid for older adults (MDCH, 2010). Non-special needs children in the state of Michigan are more able to obtain dental care within a dental office due to coverage provided by Healthy Kids Dental. However, Healthy Kids Dental is only available to Medicaid-eligible children in 61 of the 83 Michigan counties (Addressing Dental Workforce, 2009).

Michigan's Programs and Goals

Michigan continues to make progress in improving the oral health of its residents. However, in comparison to other states, Michigan has high rates of oral cancer, ranks next to last in the country for dental sealant placement—which is important because this helps to prevent tooth decay—and has significant disparities in oral health access (MDCH, 2006). In 2005, under a grant from the Centers for Disease Control and Prevention, and through the work of the Michigan Oral Health Coalition (MOCH) and the Michigan Department of Community Health (MDCH), Michigan adopted a State Oral Health Plan to build capacity and increase access to oral health care for underserved populations. In March of 2010, the MDCH released an updated report on the status of oral health in Michigan, which demonstrates collaboration among diverse stakeholders and recognizes additional issues that need to be addressed to improve oral health for Michigan residents.

Currently, MDCH's Oral Health Program monitors several programs to lessen oral disease, to reduce disparities, and improve oral health education and services. Prevention programs, oral health education programs, state programs, and referral directories in the state work to increase access to dental services across the lifespan (MDCH, 2010). One major policy change for oral care occurred in 2005 with the legislative bill PA 161, which allows dental hygienists to treat patients who are unassigned to a dentist, as well as the dentally underserved in places such as schools, nursing homes, or community centers (PA 161 Program, 2010; MDCH, 2006). MDCH reports that there are currently 152 hygienists working through 49 PA 161 programs. To continue to work towards the advancement of oral health, the 2010 Michigan Oral Health Plan contains ten goals with action steps, which focus on access, education, prevention,

and policy at the federal, state, and local levels and includes a diverse group of stakeholders and organizations (MDCH, 2010). While Michigan has some impressive resources, the need for dental care in the state is still great. New and innovative strategies are needed to increase access to dental care. Oral health coalitions, organizations, and professionals should continue to work together to provide the best possible oral health care access for all Michigan citizens.

One Possible Solution: Mid-Level Dental Provider

The information reviewed thus far has shown that lack of access to oral health care is a serious problem for many in Michigan. One way that 50 other countries, including Great Britain and Canada, as well as two states in the US, have addressed barriers to care is through a Mid-Level Dental Provider (MDP) model. MDPs are generally allowed to provide basic preventive and basic restorative dental procedures under the direct, indirect, or general (depending on the model) supervision of a dentist, with the goal of extending access to care to underserved populations:

- Alaska and Minnesota are the only two states that have approved MDPs, but other states such as New Mexico, Washington, Vermont, Ohio, Kansas, Arizona, Wisconsin, Oklahoma, and others are seriously considering such proposals. In 2003, the Alaskan Native Tribal Health Consortium began an initiative to train “Dental Health Aide Therapists” (DHAT) to care for Alaska’s native population living in remote areas of the state. This was done under the aegis of the Community Health Aide Program, a federal program recently re-authorized as part of the national health reform. Alaskan DHATs receive two years of post-secondary education and can provide basic preventive care and basic restorative care such as fillings and simple extractions (Edelstein, 2009). In May 2009, Minnesota passed MDP legislation. The University of Minnesota School of Dentistry now trains “basic” dental therapists at the Bachelors and Masters levels, and Metropolitan State University trains “advanced dental therapists” at the Masters level (students enter this program with a

Bachelors degree in dental hygiene). Both of these providers can deliver preventive and basic restorative care, with varying degrees of supervision by a dentist (Edelstein, 2009).

- Supporters of the MDP want to increase access to oral health care for the most vulnerable populations, especially children. Within Michigan, the most underserved populations in regards to oral health care include low-income children, elderly, individuals with special needs and disabilities, and ethnic and minority groups. The greatest barriers to care include cost of care and geographic inaccessibility. Most dentists in Michigan are clustered in the suburbs, making access to care difficult for those in cities and rural areas. MDPs could work within areas with underserved populations to improve accessibility.
- Additionally, this model lowers the cost of care; MDPs command lower fees for routine services and preventative dental care, and are therefore more likely to participate in MICHild or Healthy Kids Dental (Michigan's Medicaid program), which addresses the cost to patients and providers. Furthermore, with more preventative care provided by MDPs, overall healthcare costs could be reduced. MDPs could also utilize existing infrastructure such as schools, nursing homes, primary care offices, community clinics, and local hospitals. By lowering cost and improving access to dental care, this proposal would help reduce the prevalence of oral disease among Michigan's most vulnerable citizens. A recent report found that a majority of dental procedures could be delegated to properly trained MDPs (Edelstein, 2009). This would allow dentists to devote more time to advanced procedures, while creating jobs for Michigan residents. With cuts in the state budget and rise in unemployment, this new class of dental professionals would help to improve the economy within Michigan.

Concerns have been raised about the MDP model in regards to patient safety. Opponents argue that MDPs may lead to a two-tiered dental care system with second-rate care that puts

underserved populations at risk due to unsafe practice. However, numerous studies have shown that mid-level dental providers give competent and appropriate care that does not put patients at risk. One of the many examples is a study of the Canadian Dental Therapists, which compared the level and quality of care provided by dentists to dental therapists (i.e. MDPs), and found that on the basis of six restorative procedures, the quality of restorations by dental therapists was equal to those of dentists. Further, they are effective in treating dental emergencies and treating them through on-going preventive care (MDH). Additionally, the Alaska DHAT program was found to provide safe and competent care by two independent evaluators (Agency for Healthcare Research and Quality). One study of DHAT, an audit of 640 irreversible dental treatment procedures, found no significant difference in the number of any kind of complication between dental therapists and dentists (Bolin, 2010).

The need and demand for oral health care in Michigan and across the US is high, and the MDP proposal is a solution that should be given serious consideration. The issue of unmet oral health care need should be an extremely important one for social workers because oral health affects the clients and communities in which they serve, from the health of their teeth to their overall health, as well as individual's participation in society and general life satisfaction. Social workers can help improve the oral health of their clients, first by understanding the needs of their clients, and then by generating awareness about the importance of oral health. Additionally, social workers can advocate for improved oral health care access. One way they can do this is by supporting the creation of a MDP licensure in the state of Michigan. Problems in oral health can contribute to other diseases such as heart disease, diabetes, and stroke, and are associated with serious problems for newborns (USDHHS, 2000). By improving access to care and providing prevention and treatment of oral disease, Michigan residents will become healthier. As a result, individuals and the state will save on health costs. Increasing access to oral health care is essential to reducing disparities and improving the lives and health of others. While Michigan works hard to address the unmet needs of the state, new and innovative approaches are needed to address access to oral health care. The MDP is an effective proposal that lowers cost for care and creates jobs, and also increases access to care for

underserved populations and improves the oral care and overall health of citizens.

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